REPORT

OF THE

CONFERENCE OF DIRECTORS

OF

PUBLIC INSTRUCTION

DELHI, JANUARY 1917.

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LIST OF MEMBERS OF THE CONFERENCE.

1. The Hon'ble Sir C. Sankaran Nair, Kt., C.I.E., B.A., B.L., Education Member of the Viceroy's Executive Council.

2. The Hon'ble Sir E. D. Maclagan, K.C.I.E., C.S.I., I.C.S., Secretary to the Government of India, Department of Education.

3. The Hon'ble Mr. H. Sharp, M.A., C.S.I., C.I.E., Educational Commissioner with the Government of India.

4. The Hon'ble Mr. J. H. Stone, M.A., C.I.E., Director of Public Instruction, Madras

5. The Hon'ble Mr. J. G. Jennings, M.A., Director of Public Instruction, Bihar and Orissa.

6. J. G. Covernton, Esq., M.A., C.I.E., F.R.N.S., Director of Public Instruction, Burma.

7. The Hon'ble Mr. J. C. Godley, M.A., C.S.I., Director of Public Instruction, Punjab.

8. The Hon'ble Mr. C. F. de la Fosse, M.A., Director of Public Instruction, United Provinces.

9. A. L. Covernton, Esq., M.A., Offg. Director of Public Instruction, Bombay.

10. The Hon'ble Mr. W. W. Hornell, M.A., M.R.A.S., Director of Public Instruction, Bengal.

11. The Hon'ble Mr. A. I. Mayhew, M.A., Director of Public Instruction, Central Provinces.

12. The Hon'ble Mr. J. R. Cunningham, M.A., Director of Public Instruction, Assam.

13. J. A. Richey, Esq., M.A., Director of Public Instruction, North-West Frontier Province.

14. G. Anderson, Esq., M.A., Assistant Secretary to the Government of India, Department of Education.

Speech delivered by His Excellency the Viceroy at the opening of the Conference.

His Excellency the Viceroy, in opening the Conference, said:—

Gentlemen,—I do not propose to do more than offer you a few words of welcome on the occasion of your meeting together and briefly touch on the various matters which are going to engage your attention. I should like in the first place to emphasise the publicity of your proceedings. Education is not a subject to be wrapped up in mystery and discussed behind closed doors. We wish to awaken an intelligent interest and an active co-operation on the part of the general public, and we can only do this by taking them completely into our confidence. Above all, we must remove the idea that we have any ulterior motives behind our educatioual policy. In my speech at the Convocation of the Calcutta University I laid stress on educational questions being dealt with on educational lines with a single eye to educational efficiency. I hope this open conference will show that this is the case and that no political considerations find a place in your discussion of purely educational problems. There is a further circumstance to be borne in mind in this connection. It is all-important to enlist the interest and sympathy of the general public in the matter of education. Those of you who have had experience of English conditions will remember the widespread indifference of the general public to educational questions. The lessons of this war may to some extent correct this attitude, but we want equally in India to bring home to people generally the paramount importance of education in their lives, and I think nothing is better calculated to quicken the public interest than open conferences from time to time, which will show the importance which the Government of India attach to education. It may be said that this conference partakes of a purely official character. I would point out, however, that in the resolution of 21st February 1913, the general lines of our educational activities were laid down after the public had been taken into our confidence at three conferences attended by many non-officials. If it was a question of revising radically the policy already laid down, we should undoubtedly have invited the help of some of the many non-officials who interest themselves in education. But for the present we are in the main confronted by problems in which expert official assistance is primarily required. Owing to the war, it is now necessary for us to select what we can afford to adhere to, and to decide what we can with least disadvantage postpone. This is largely a matter in which expert advice is necessary—the advice of men who administer funds and who are accustomed from day to day to select between the good and the better. There is then no question of springing any new and startling educational policy upon an unsuspecting public. Indeed, our task in India at the present moment seems to be rather to examine and make sure of our foundations. We are all in agreement that primary education should be further extended. I take that as common ground. But schools depend for their efficiency on the quality of their teachers, and inefficient schools represent so much good money thrown away. I would press upon you, then, in the first place, concentration on the teaching problem. We want, as I said lately in Calcutta, to raise the status of the teaching profession, to make it a calling with prizes which will induce men to enter it as a life profession. For this we must raise the pay of the teachers. Much has no doubt been done in recent years to raise the pay of teachers, but I would ask you to consider whether the pay given now, and more especially the minimum pay, is adequate. As one who had the task of tackling this particular problem in London some thirteen years ago, I know the difficulties of the question and the need there is for careful preliminary investigation. Having got your teacher, your next task will be to train him, and it is impossible, I think, to over-estimate the value of training. At the present moment out of 267,000 teachers in India you have only 80,000 who have undergone a course of training. Even if the percentage were higher I would still urge the paramount importance of training. The quality of the

teacher is the alpha and omega of educational efficiency. One last word on this topic. You have secured your teacher and you have trained him. It remains for you to keep him. There can be, I think, no better way of building up a permanent service than by the establishment of a provident or pension fund scheme whose benefits are sacrificed by premature retirement. I hope that the scheme which was evolved some three years ago and which is still under consideration may meet the end which we have in view.

I turn now to the second main subject of your discussion—technical training. Naturally at the present moment when the Government of India are hoping for a lead from the Industrial Commission in the direction of industrial development, technical training looms large in the educational sphere. There are two things I would wish to say with regard to this question First, consider "technical" in its widest and not its narrowest sense,—by this I mean, do not overlook the claims of agricultural and commercial education. There are some who say we have nothing to teach the men on the land in this country. I cannot claim to talk with authority on such a question, but having seen something of the work of scientific agriculture in other parts of the world, I take leave to doubt such a statement. The great advance made by scientific agriculture during the last half century justifies us in pressing forward with a policy of agricultural education ; and though you would not claim to speak as experts on the agricultural side, your educational experience qualifies you to give us useful hints with regard to an advance along this road. Again, on the commercial side of education, I am surprised to find how little has been done in spite of India's large and growing commerce, and I am puzzled as to its cause. It may be that it is obvious to you, but I have not yet had any satisfactory explanation given to me. Compared with a technical institution, a commercial school is a relatively cheap institution, and one would think that there was a great opening in our big towns for good commercial schools.

The second point on which I would lay emphasis is that in technical training in its narrower sense we must not lose sight of workshop practice in outside works. Laboratory training, however good, is no real substitute for the discipline of the workshop. I am well aware of the difficulties which stand in the path, and I merely strike this note of warning that technical training divorced from workshop experience is likely to prove a snare and a delusion.

The subject of women's education is going to engage your attention. You are more familiar than I with the obstacles arising out of social custom which stand in the way, but I would say this that I view with apprehension the growing inequality between men and women arising out of difference in education. It cannot be good for a country that its women should lag so far behind men in this matter of education. I believe that this apprehension is shared by many Indians, and I think it behoves us to do all in our power to improve women's education, so far as we can do so within the limits laid down for us by social customs. In the meantime, we must look to and hope for a gradual change in public opinion, and in this we can count, I hope, on the support and co-operation of all educated Indians. I trust, however, that in the consideration of this most important matter, we shall enlist the co-operation of women. It is they who know where the shoe pinches and any purely man-made scheme is foredoomed to failure.

There is one more matter with regard to which I should like to say a few words. I am fully aware that it is highly controversial, and that it has more than once been the subject of discussion, but it lies so deep in the foundations of our education that I think it well to bring the matter forward, especially at a time when our task is, as I have said above, to examine and consolidate our educational foundations. I refer to the relative claims of English and vernacular teaching. At the present moment we rely on English as the medium of our higher instruction. This is due mainly to the fact that English is the passport to employment and that vernacular text-books are not available. But the consequence is obvious,—students endeavour to grapple with abstruse subjects through the medium of a foreign tongue, and in many cases through their mediocre acquaintance with that tongue have perforce to memorise their text-books. We criticise adversely this tendency to memorise, but to my

mind it reflects credit on the zeal of the students who, rather than abandon their quest for knowledge, commit to memory whole pages, nay, whole books, which they understand but imperfectly. This is of course a mere travesty of education. I had an opportunity the other day of conversing with a prominent Indian gentleman on this very subject, and he told me his personal experience. When he was at the University he took up history as one of his subjects and found, though he is an admirable English scholar now, that his acquaintance with English was insufficient to enable him to understand his text-book, so he resolved to memorise the whole book. In the course of his examination he had a question, the answer to which he knew lay in a certain page, but he was uncertain what portion of the page was relevant, so *ex abundanti cautela,* he wrote out the whole page. For this he obtained fewer marks than he thought he was entitled to. On remonstrating with the examiner, he was told that his answer contained so much irrelevant matter, that it was clear that he did not rightly comprehend the question. I think this piece of evidence illustrates the defects of our present system. I would ask you, and I ask myself, as university men, how should we have fared in our education if it had been wholly through the medium of a foreign tongue? I doubt whether we would not have abandoned the attempt in despair, and I am lost in admiration for the grit of those boys who make a gallant attempt to surmount the difficulties imposed on them by a vicious system. The remedy seems to me to lie in one of two directions, either we must teach in vernacular as long as we can and put off to the latest possible moment the use of English as a medium of instruction, or we must concentrate our attention more closely on the teaching of English. Or can any middle course be suggested which is sound on educational lines? I understand that it was arranged some two years ago in the Legislative Council that local Governments should be addressed on this subject generally when the war is over. I have no intention of bringing up the question for decision in advance of the time so arranged, but I wish it to receive thoughtful consideration without bias, so that when the time comes, not only will you have discussed and thought over it in your own provinces and be ready to give us your opinions, but the best minds in India will also be equally ready with their opinion.

In conclusion, may I express my appreciation of the difficult and exacting duties which the modern development of education entails for a Director of Public Instruction in this country. It is not merely that work has increased much in volume. That is no doubt the case, but with the increase in volume has come a still greater increase in complexity. You are dealing, too, with a subject on which almost every educated man is himself interested, and you are subjected to an almost overwhelming amount of outside advice and outside criticism; you have to deal with large bodies of men who are in no way subject to your control and whom you can influence only by perseverance. You have often to support a line of action which, however it may commend itself to you as experts, has failed to find favour with those whom it affects. For the fulfilment of your duties you require unlimited enthusiasm, unfailing courtesy and unflinching resolution. These qualities have been displayed by directors in the past, and will, I trust, continue to be displayed by them in the future. India owes much to the Directors of Public Instruction and to the fine service which they represent; and although the work you have to do may become more complex and more difficult, you will, I am sure, continue to maintain the qualities of your predecessors and the tradition of your service.

Comparative claims of different classes of education.

Distribution of expenditure.

The directors were generally agreed that the claims of all forms of education were such that it was impossible to divert any existing grants from one branch to another. In regard to any additional grants that may be made by the Government of India in the future, opinions differ. In *Bengal* the most urgent necessity is the improvement of the secondary education system which should, it was suggested, be extended up to something similar to the present intermediate standard. All branches and especially primary education are sorely in need of additional assistance, but the improvement of the secondary system is the most imperative necessity. In the *United Provinces* and in *Burma* collegiate and secondary education, and in the *Central Provinces* collegiate education, are in particular need of additional grants. In *Madras* though the expansion of collegiate education is of some importance, the primary system in particular and secondary education to a lesser extent demand more attention. In the *North-West Frontier Province* to which liberal grants have been made by the Government of India for secondary and collegiate education, and in the *Punjab* additional grants should be allocated almost entirely to primary edcation. In *Bombay* the present scale of distribution is fairly satisfactory, but if further grants are forthcoming the claims of primary education should be considered first. In *Assam* and in *Bihar and Orissa* large additional grants are so urgently required for practically every department of education that it is not possible at this stage to single out any branch for preferential treatment. All directors were agreed that the improvement and expansion of training facilities needed consideration.

The suitability of instruction in the lower classes of primary schools.

2. The Chairman then referred to a statement recently made to him that a very large proportion of pupils leave school before the close of the lower primary stage is reached and soon forget what they have learnt in school, with the result that the money spent on that teaching is wasted. He asked whether that statement was true and, if so, what were the causes? Most of the directors thought that there was wastage. Mr. Stone said that fully half the number of boys who entered the primary standards did not go beyond the infant classes. Mr. Richey agreed and quoted figures in support of Mr. Stone's contention. There was some difference of opinion about the causes of this defect. Mr. Stone suggested that the methods of giving grants-in-aid might be improved. The capitation system in his opinion encouraged "grant-earners" who helped to swell the numbers in the elementary classes, but could scarcely be regarded as *bonâ fide* pupils. Mr. Stone suggested that the present *Madras* system could be improved if the award of "merit" grants were made to approximate somewhat to a results grant system, and capitation grants were calculated upwards from a minimum for infants. Mr. Hornell emphasised the fact that the withdrawal of the results grant had caused a serious set-back to primary education and criticised the existing grant-in-aid system as singularly ineffective. There was strong opinion in certain quarters that the root of the trouble was the indifference of the parent towards vernacular primary education if it did not lead direct to English education. Mr. Stone mentioned that the teaching of English in the third and fourth standards which was permitted under certain conditions in *Madras* was very generally approved. His own opinion was that vernacular education is valued for its own sake in *Madras*, but there is also a demand for a little English education even on the part of those parents who have no idea of their boys going further than an elementary school. Mr. Hornell thought that the primary system should provide for a type of school which taught the simplest and most rudimentary curriculum. At the same time competent teachers should be encouraged to teach such additional subjects as may be regarded to be suitable. It was essential that the primary school system should lead on to the secondary. Mr. A. L. Covernton pointed out that the experiment of giving a limited vernacular education in the rural schools in *Bombay* had not been appreciated. Mr. J. G. Covernton remarked that in French Indo-China the teaching of French and in the Philippines the teaching of English were introduced into the lower standards of primary schools, but he could say little about the results of the system. Other directors held the opinion that vernacular education, if conducted

efficiently, was very much appreciated and that the defect referred to by the Chairman was due rather to unsatisfactory teaching. Mr. Richey, therefore, desired the substitution of board for "venture" schools. Mr. Jennings and Mr. de la Fosse thought that the feeble results of the schooling were due to a teacher having to instruct some three or four standards and to the lack of proper inspection. In *Bihar and Orissa* an attempt had been made to confine a teacher's work to two standards only; and in the *United Provinces* the effect of having more and better teachers for these lower standards had recently been tested on a limited scale, with the result that the proportion of boys proceeding to the higher classes was immediately increased. Mr. Cunningham, however, considered that even if only 5,000 out of 100,000 pupils reached the close of the lower primary stage and thus came permanently into the class of the literate, he would not regard the money spent on the remainder as wasted. As education advanced, the proportion would improve.

3. The general opinion was that if additional grants by the Government of India were definitely earmarked for primary education, the view might be held in certain quarters that Government was trying to discourage higher education. It would be better to leave the distribution of grants to the local Governments. If money were passed on to local boards and municipalities, the general idea was that the needs of primary education would not suffer by such an arrangement, but Mr. de la Fosse was somewhat nervous lest these bodies might favour secondary at the expense of primary education. The work of the district boards has been satisfactory on the whole, but the position of municipalities in the general scheme of education needs readjustment. Additional grants should not be earmarked.

4. In answer to the Chairman's inquiries about the progress made in fulfilling the hopes expressed by the Government of India in 1913 that the pupils under primary education would in the not distant future be doubled in number, it was found that owing to lack of funds the programmes submitted by local Governments have not been fulfilled to any great extent. In *Burma* and the *North-West Frontier Province*, however, the original programmes, subject to a few modifications, have been carried out. Progress in primary education since 1913.

In answer to an inquiry, Mr. Sharp said that the educational policy laid down by the Government of India in 1913 was not merely a pious hope, but was intended to be a practical and practicable scheme of progress.

5. In regard to policy, Mr. Hornell said that in *Bengal* there were board and aided schools and that any real improvement lay in the direction of the former, seeing that they had some permanent stability. On the other hand, any sudden discouragement of the latter was to be deprecated, as it would result in a serious diminution of numbers. The aim of the panchayati union scheme which was evolved by the Government of *Eastern Bengal and Assam* and had now been made applicable to the whole Presidency, was to place one board school in each panchayati union, an area of about nine square miles. This scheme would not of course provide anything like an adequate number of primary schools, but if carried out would be a beginning of a system of school provision as opposed to the haphazard method of encouraging a primary school teacher, whenever and wherever he could be found. In the *United Provinces* Mr. de la Fosse said there had been some waste of money through undesirable competition between primary schools. This matter, however, had been referred to a committee and a plan for the removal of this defect discovered. The effect of its adoption was that though the number of schools had been reduced, the number of pupils had been increased by 13,500. Primary school policy.

6. The directors were generally in agreement with the proposal that local bodies be given powers to impose a special cess for primary education, a practice which was already in force in *Berar*. Mr. Stone said that the unofficial members of the Legislative Council in *Madras* favoured very strongly the proposal as regards municipalities. Messrs. Cunningham, de la Fosse and Jennings approved the principle. Mr. Godley thought that such a measure was inevitable, if primary education were to be extended satisfactorily. Mr. A. L. Covernton and Mr. Richey were of the opinion that local bodies had become accustomed to rely so much on Government assistance that they might be opposed to additional taxation; but the former held that, if local taxation Responsibilities of local authorities.

were accompanied by increased Government assistance, these objections of local bodies would probably be removed. Mr. Hornell was also in agreement with the proposal in theory, but feared that in *Bengal* municipalities would be unable to increase taxation for the sake of education, as there were other very urgent needs before them. Regarding district boards, his impression was that most of the funds which they received were earmarked for specific purposes. He had never heard it suggested by any chairman of a district board that additional funds could be raised without difficulty, whether for education or for any other purpose. He thought that the whole question of local education authorities in *Bengal* and their responsibilities towards education needed investigation. Mr. J. G. Covernton also agreed with the general principle, but doubted whether the proposal would be suited to the local conditions of *Burma*.

Other means of raising additional revenues.

7. In regard to the inquiry whether any class of education might receive substantial development in any other way than the spending of public money, the question of fees was discussed. It was generally agreed that the fees in primary schools could not be increased at present. In regard to secondary schools, it was pointed out that in many provinces such as *Bombay*, the *Central Provinces, North-West Frontier Province* and *Madras*, the fees in secondary schools had recently been raised. In *Bombay* the amount of money thus received is earmarked for the improvement of the schools. There has been a certain amount of discontent of a temporary nature, but no appreciable diminution in the number of scholars. It was not considered advisable to raise the fees any further at present. Mr. Mayhew, however, thought that it might be possible to raise fees before long, but would not recommend such a step until there had been a systematic inquiry into its justification. He also hoped that additional assistance might come from private subscriptions and endowments. Mr. Hornell suggested that the large sums of money now paid for private tuition might well be diverted to the revenues of the schools themselves. If the boys were properly taught at school, private tuition except in abnormal cases should be quite unnecessary.

Technical Education.

The teaching of science in secondary schools.

8. The Conference first discussed whether any special steps are necessary for the expansion and improvement of science teaching in secondary schools. Mr. Stone said that in *Madras* object lessons were given in elementary schools. In the middle classes of secondary schools subjects verging on science were studied, and in the higher classes elementary science was obligatory; in the higher classes of secondary schools physics, chemistry, botany and natural history were taught Additional science courses could also be taken in the two highest forms. In *Bombay* science is compulsory in Government high schools throughout the course, except for the school-final candidates. The University demands for matriculation the study of science in the two high standards and a certificate from the headmaster that the course has been accomplished, but there is no examination in science conducted by the University. In the *United Provinces* physics and chemistry together constitute one of the alternative subjects for the matriculation. The teaching is based on a text-book without any practical work and is, therefore, to a large extent valueless. Laboratories have been provided in schools in connection with the school-leaving certificate and have created a revolution in science teaching. This science teaching occupies four years, bifurcation taking place four years before the examination. It was thought suitable to prescribe other courses, *e.g.*, a classical course as alternative to science. In the *Punjab* science is compulsory in the science matriculation and is optional in the arts matriculation,

but it is commonly taken as an optional subject in the latter. Mr. Godley was of the opinion that the popularity of science is increasing, but it should not be made compulsory for all pupils. In the *North-West Frontier Province* science is compulsory in the middle stage and a good many of the pupils continue its study in the high stage. In the *Central Provinces* science is optional in the middle classes, but Government schools insist upon it at that stage. Special attention has been paid in recent years to the improvement of laboratories. It was mentioned that there is a science inspector in *Bombay*, the *Punjab* and the *Central Provinces*. Mr. J. G. Covernton expressed the need for one in *Burma*.

In those provinces, however, which come under the Calcutta matriculation, the position of science teaching is not so satisfactory. In *Bengal* Mr. Hornell thought the present state of affairs deplorable, as there is practically no science teaching whatever in schools for Indian pupils. One of the optional subjects for the matriculation examination is elementary mechanics, but very few candidates offer this subject. Geography is also an optional subject for matriculation. Otherwise, no provision whatever is made in the Calcutta University matriculation for the teaching of science. Looking to the peculiar difficulties which underlie the educational problem in *Bengal*, Mr. Hornell thought that it would be well to make practical science obligatory and he would include it in the school-leaving certificate. In *Assam* there is again very little science teaching in the schools. Mr. Cunningham could find no good grounds for making science compulsory for all pupils undergoing a secondary school course, if by that term was meant the detailed study of a particular science. He suggested that it should be sufficient to give pupils in the secondary classes a rudimentary course introducing them to the more important principles of natural science in its various branches. The expense of providing laboratories would be a difficulty in the way of compulsion. In *Bihar and Orissa*, though very elementary science is taught in the secondary vernacular schools, there is no science teaching in the secondary English schools. Mr. Jennings hoped that with the introduction of the school-leaving certificate better provision would be made for science. Mr. J. G. Covernton said that in *Burma* it was intended to improve the science teaching, but as yet little could be done through lack of funds. Some guidance in the matter was expected from the recommendations of the committee recently appointed in England.

The general feeling was that science should not be made compulsory as an advanced or formal subject. Most of the directors, however, were in favour of some elementary training in science, and Mr. Hornell would insist on some practical science teaching during the school course.

Training for non-literary careers after the completion of the school course.

9. The next subject for discussion was the preparation of boys for non-literary careers either at the University or elsewhere after the completion of the school course. The existing facilities in different provinces were described. *Madras* has an engineering college, and applications are always in excess of available places. In *Bombay* there are colleges of Engineering and Commerce. In the former the students are usually graduates, but there are also workshops to which pupils with lesser qualifications are admitted. In the latter, students are admitted who have attained a principal's certificate after the conclusion of a year's course in an arts college, and then prepare for the Bachelor of Commerce degree. The School of Art and the Victoria Jubilee Technical Institute offer various courses and admit pupils of very varied qualifications. In the former institution, there are special classes in architecture, and proposals have been submitted for instituting a degree in that subject. Mr. Covernton remarked that the practical work in pottery has been very successful. In *Bengal*, there is the Engineering College at Sibpur and the Engineering School at Dacca; the former is a University college of engineering to which an apprentice department is attached and in which provision is also made for the training of artisans; the latter has apprentice and artisan classes only. These institutions are liberally supplied with scholarships and freeships. There is also the Serampore Weaving School which attracts a large number of students, some of whom are graduates. In the *United Provinces* manual classes are common in schools and the subject is helpful to those who wish to gain admission to Roorkee. It has been proposed to transfer the lower subordinate class from Roorkee; and the mechanical

apprentice class has already been transferred from there to the Technical School, Lucknow. The Roorkee College will eventually confine itself to higher grade work. There are also schools for artisans, the Carpentry School at Bareilly, the School of Arts and Crafts at Lucknow, and the Weaving School at Benares. There are also commercial classes, the University having instituted a commercial course of two years. Mr. Godley referred to the technical institutions and scholarships in the *Punjab* such as the Engineering School at Rasul and the Agricultural College at Lyallpur. In *Burma*, a number of technical subjects were made optional in anglo-vernacular schools some years ago under the results grant system. The work has not been very satisfactory. The Burman, in Mr. Covernton's opinion, is clever at manual labour, but is not attracted by it. In some of the schools conducted under American agencies book-binding, printing and masonry are taught. The School of Engineering at Insein has taken a new lease of life and now attracts Burmans, the introduction of the "sandwich" system having had happy results. In *Bihar and Orissa*, besides the agricultural institutions of Pusa and Sabour, there are technical and commercial schools, the qualifications for admission to which are varied. There is an artisan school at Ranchi, a class for Europeans at the Jamalpur railway workshop and proposals for a mining school at Dhanbad and a technological institute at Sakchi. The commercial and agricultural schools number three and two, respectively. In the *Central Provinces*, there is a school of engineering. In *Assam*, there are some small schools of very doubtful utility, while places are reserved at Dacca and Sibpur for boys from *Assam*. In the *North-West Frontier Province*, the question of technological training has not yet been seriously discussed.

Future development.

10. In regard to future development, three suggestions were emphasised by the directors—

(*i*) In some provinces it was obvious that the demand for admission has outstripped facilities. Mr. Hornell urged that there is a strong demand for men in mechanical and electrical engineering work, but the supply of civil engineers is adequate. Mr. Stone thought that the best means of development would be the multiplication of industrial and technical institutions. Mr. Cunningham was strongly opposed to the increase of industrial schools which would exist in an economic vacuum, save in places where there was a market for employment. In some provinces, it was thought that existing facilities sufficed.

(*ii*) Mr. Stone was strongly in favour of manual training in the existing schools and would like money to be spent on this object. This work would show whether or not a boy had a bent for technical employment. Mr. Mayhew agreed. He considered that the Education Department should confine its attention to offering a sound general education of not too exclusively a literary type. In his opinion the Department should have nothing to do with vocational training. There was a very general agreement with Mr. Stone on the benefits to be derived from manual training.

(*iii*) There was a very general opinion that more use should be made of the apprentice system in workshops attached to commercial concerns. Mr. Hornell thought that for the training of mechanical engineers it would be well to give part of the training in railway workshops and under firms such as Messrs. Burn and Company. He would reserve places in the apprentice department at Sibpur and Dacca for a certain number of boys who had reached a standard roughly equivalent to that attained under existing conditions two years before matriculation, had undergone an examination conducted by the Education Department, and then completed in addition a term of apprenticeship in workshops. The apprentice departments would at the same time continue to take B. class or matriculate students. At present he found that many boys in the apprentice departments at Dacca and Sibpur left before the completion of their course, as they felt that the work was not suitable to them. This was especially the case with those who took up the mechanical and technical courses at Sibpur. Mr. Mayhew said that at Nagpur in the case of mechanical engineering the last year of the course would be spent in private workshops. Mr. Cunningham was in favour of an apprenticeship system. Mr. Godley, on

the other hand, said that the attempt to combine apprenticeship in the railway workshops at Lahore with higher instruction in the railway school had not proved popular. Mr. de la Fosse said that in the *United Provinces* they were gradually giving up artisan classes as it was found that a craftsman could get better training from his father. Mr. Covernton thought that any multiplication of schools should be organised in connection with an apprentice and workshop system.

11. With reference to the question whether a sufficient proportion of the funds devoted to education generally was being spent on technical education, Mr. Cunningham said that the question could not be dealt with on an arithmetical basis. Conditions varied in different provinces, and in any case there were no *data* on which a computation of proportions could proceed. This view was generally accepted and the question was not discussed.

Training of Teachers.

Consideration of the recent Government of India Circular.

12. The feasibility of the Government of India Circular no. 813, dated the 30th of August 1916, was first discussed. On the whole, replies were favourable and especially in *Madras*, the *North-West Frontier Province* and the *Punjab*, where it was hoped not only to make up for wastage but also gradually to substitute trained for untrained teachers. The percentage of trained to untrained teachers was also higher in these than in the other provinces. In the *North-West Frontier Province* the position is satisfactory, as the aided schools demand the services of trained teachers to a considerable extent. If an expansion of education is decided upon, it will be necessary to start a new training institution. Mr. Stone said that in *Madras* it would be possible to make suitable provision for the training of new teachers at the cost of 11 lakhs recurring and 66 lakhs non-recurring. He emphasised the importance of the part played by the training institutions in promoting education and referred to the excellent results achieved by the college at Saidapet. Mr. Cunningham thought that in *Assam*, provided that there was no sudden expansion of education and that funds for the establishment of new training institutions were granted in reasonable measure, there would not be much difficulty in fulfilling the requirements suggested in the Government of India's circular letter. He considered, and Mr. Hornell agreed, that the system of depending on Dacca for the training of secondary teachers for *Assam* was neither adequate nor desirable ; and therefore the establishment of a training college in Assam was essential. In *Bihar and Orissa* the existing training facilities are not sufficient to meet even the present demands, and Mr. Jennings thought that considerable additional expenditure would be necessary. In the *United Provinces* the facilities for the training of primary schoolmasters are satisfactory on the whole, but more normal schools are badly needed. For English schools there is a training college for graduates at Allahabad and one for undergraduates at Lucknow; but it will be necessary as soon as funds are forthcoming to have an additional institution at Agra similar to that at Lucknow. In the *Central Provinces* the position is satisfactory, but the aided secondary schools still need trained teachers. Mr. de la Fosse emphasised the success of the training classes in the *United Provinces*. Mr. Cunningham said that in *Assam* there were a number of such classes both in the plains and in the hills. More, however, are needed for which additional funds will be required.

The difficulties in providing suitable training facilities seem to be greater in *Bengal* and *Bombay* than elsewhere. Mr. Hornell said that it was

as yet impossible to train enough teachers even to make up for wastage. Though it might be possible to provide for the needs of Government high schools, the problem of aided schools was almost insoluble. Even if training facilities were available, it was doubtful whether a large number of candidates would use them, so unattractive are the conditions of teaching in *Bengal*. In *Bombay* the training college can barely supply the needs of the Government high schools. It will be a long time before teachers even in the Government schools are all trained. In Poona, an attempt has been made through the agency of two teaching authorities to assist in the improvement of the methods of teaching adopted in the aided schools of that city. This is a poor substitute for training and can only be regarded as a makeshift. Very considerable expenditure will be necessary to bring it about that even a small proportion of the teachers in aided secondary schools shall be trained. Mr. Covernton stated that the number of primary training institutions is sufficient to fill up vacancies as they occur.

Mr. Mayhew was of the opinion that the first subject for consideration was to decide what proportion of the new teachers should be trained. Mr. Richey was doubtful whether it would be advisable to train all the teachers, as in the *North-West Frontier Province* there might not be enough vacancies in the schools to go round, should the expansion of education be impeded in any way.

Experience of the teachers in charge of training institutions.

13. The Chairman asked whether the officers in charge of the big training institutions had themselves undertaken a course of training in Europe. Mr. de la Fosse stated that the regulations of the Allahabad University were very stringent in the matter and that the teachers of training colleges in the *United Provinces* were, therefore, themselves men who had received a secondary training in the United Kingdom.

Duration of the courses.

14. The directors were almost unanimous in protesting against any reduction in the duration of the courses and especially in those for the vernacular school teachers. In *Burma*, however, the Educational Syndicate is engaged in considering whether some of the courses at any rate may be reduced in length, but no decision has yet been made in the matter. In *Madras* the Government has recently decided to lengthen the secondary training course from one to two years. Mr. Stone said that an attempt was being made to impart a general education in an elementary training school to the teachers in addition to the professional training. Mr. J. G. Covernton feared that in *Burma* this tendency had been exaggerated and that the practical and professional side was sadly neglected. In the training classes in *Bombay* the course may be of one, two, or three years, the duration depending very largely upon the capacity of the teacher to benefit from the training. In *Western Bengal*, the *Guru* training school course extends over two years, discretion being given to inspectors to allow exceptional men to take the whole course in one year. Such concession is ordinarily allowed to those *Gurus* only who have passed the middle school examination. In *Eastern Bengal* the *Guru* training course for those who entered upon it as teachers is of one year. Those who are not teachers take the course in one or two years according as they have or have not read up to the middle vernacular standard. The normal school course is one of three years in *Western Bengal* and of two years in *Eastern Bengal*. Special provision is also made for a one year course for those already engaged in teaching. The B. T. and L. T. courses are each for one year. Mr. Mayhew said that in the *Central Provinces* there was a secondary course of two years and a primary course of two or three years. In neither case would it be advisable to reduce the length of the course. Mr. Godley said that the weak point in the *Punjab* system was the shortness of the course, which was of one year in the normal schools and of one to two in the training college. In the *United Provinces*, the course is of two years in the normal schools and of one year in the training classes.

Inducements for teachers to undertake training.

15. The Conference then considered the difficulties in obtaining satisfactory candidates for teacherships and by what means teachers might be induced to undertake a course of training. There was a general impression that the prospects offered were insufficient to attract a large number of suitable candidates to the teaching profession. There has been, however, considerable

Female Education.

The demand for female education.

18. The Conference first discussed the reasons why there had been so little progress in the past and how far there existed a demand for additional facilities. The general condition of things in various provinces was briefly described. It appeared that a genuine desire for education was growing up in some provinces, and in *Madras* and *Bengal* for English education. Mr. Stone said that in *Madras* the Government, municipal and mission schools were increasing in numbers. Mr. Godley said that in the *Punjab* there had been a considerable advance in recent years and there was a steadily increasing demand. In *Assam* there is undoubtedly a demand and numbers can be largely increased by the establishment of new schools. Many of the girls would leave school before learning much, but Mr. Cunningham said that their attendance even for a short time would serve a useful purpose. By this means a beginning at any rate would be made. On the other hand, there was considerable apathy in some provinces. In the *Central Provinces* there are only 2,000 girls in classes above the three primary standards and it is found that despite liberal grants Government cannot create a demand. In the *United Provinces* also there is apathy and advance is slow.

Separate provision for girls.

19. Mr. J. G. Covernton said that in *Burma* boys and girls mixed freely together and, therefore, the girls used the ordinary facilities for instruction provided in the schools for boys. Mr. Jennings said that in *Bihar* feeling was in favour of separate girls' schools, but that, speaking generally, there was no objection to the ordinary schools in *Chota Nagpur* and little in *Orissa*. In *Bengal*, Hindus generally desire to educate their girls up to the age of twelve. There does not seem to be any strong reason why the Hindu girl of the *bhadra log* class should not ordinarily be at school between the age of six and twelve. In the case of Muhammadans the progress is slow, and it is necessary to have separate Muhammadan schools staffed by Muhammadan lady teachers. In both cases schools for boys and girls should be separate. Mr. Hornell was not in favour of separate caste schools for Hindus. In the *North-West Frontier Province* separate provision is usually made for Muhammadan and Hindu girls by enabling them to sit in separate rooms in the same building. This is due merely to the difference of script. Mr. Hornell instanced the demand for religious instruction in the Muhammadan schools.

Management.

20. Mr. Stone said that a conference on the subject had recently been held in *Madras*. A recommendation was made in favour of delegating powers to local bodies where such bodies could undertake the powers, and the establishment of local advisory committees for groups of schools. Mr. Stone was in favour of local board management. There might be in addition local committees for a district, but these should have only advisory functions. Mr. A. L. Covernton said that in *Bombay* there was less reason for Government giving up the control of girls' schools than in the case of boys' schools because it was found that private agency was less sympathetic towards the expansion of female education. In support of this contention, he referred to a local board which said that it saw no need for separate girls' schools or for women teachers and so forth. If special committees were formed and given powers, there might be great confusion. Difficulties would also arise over the proper area to be assigned to the committees. He could not see that a local committee was in any way superior to a deputy inspector who knew about the schools and was in touch with local opinion. The committee also would not be able to travel about the district. Mr. Hornell said that in *Bengal* many of the primary schools were aided by Government but the bulk were aided by district boards and should so continue. These schools should be administered and controlled by the boards. He was not in favour of the extension of Government schools. Sadar schools had been established in *Bengal* in accordance with the advice of the Female Education Committee appointed by the late Government of *Eastern Bengal and Assam*. These were middle schools, sometimes under Government and sometimes aided and managed by a committee. He was in favour of a local committee for the management of each secondary school. In the *United Provinces* advisory committees had been started in each district with high hopes, but interest had been found to be intermittent

and the best schools were the model schools maintained by Government in which no committee exists. In the *Punjab*, there has been a request for more Government secondary schools. Private schools are usually aided by Government. Mr. J. G. Covernton said that in *Burma* the raising of the question of control was very unfortunate, and the proposals had caused alarm. The best higher education for girls was conducted by missions, who had been much worried by the suggestion of local committees. Girls' education in *Burma* was thoroughly mixed up with boys' education. Local committees (save the divisional school boards which were now to be established) might tend to spoil both. In *Bihar and Orissa* there are managing or advisory committees for all girls' schools and it is proposed to hand over primary schools to local bodies. Mr. Jennings thought that local committees should have only advisory powers. In the *Central Provinces* Mr. Mayhew said that he was quite prepared to hand over the primary schools to local bodies, provided that efficient management could be secured. The liberal treatment afforded in the *Central Provinces* could effect no progress until there was a more genuine demand for girls' education. Mr. Cunningham saw no reason for changing the system in *Assam*. Mr. Richey said that in the *North-West Frontier Province* private agency was not advancing female education, but the municipalities were doing good work. The existing local bodies could exercise better control than any one else.

The general upshot was that with some exceptions Government schools should be maintained, that local bodies were suitable for the control of girls' schools, and that additional local committees, except in an advisory capacity, did not offer much advantage.

21. Mr. Stone thought that a liberal education was the main aim with some admixture of domestic economy. He was not in favour of making a move towards religious education. Mr. A. L. Covernton thought that the elementary curriculum should be simple and much the same as for boys. He was in favour of a liberal rather than a vocational curriculum for secondary schools. The position was different from that in England where the school had usurped the functions of the home. If there was a need for vocational instruction, it should be given in home classes. He thought there was a demand for three types of curriculum,—a vernacular curriculum, a simple secondary curriculum with some English, and a curriculum similar to that for boys and leading to the matriculation. Mr. Jennings said that the new curriculum arranged in *Bihar and Orissa* in accordance with the advice given by a committee consisting entirely of ladies was very elastic and differed largely from that for boys. It contained oral English, religious instruction and domestic work. It was capable of much modification. Mr. Mayhew denied that parents were at all influenced by the nature of the curriculum in their determination to send girls to school or not. Under present conditions, Mr. Cunningham could see no place for vocational instruction in the ordinary school courses. **Curriculum.**

The general feeling appeared to be in favour of a simple liberal curriculum with a minimum of vocational teaching, if any, and slightly easier than that for boys.

22. The feeling was general that the lack of women teachers greatly prejudiced the cause of female education. Mr. Hornell said there was a demand for a separate Muhammadan training class in Calcutta. Mr. Stone said that there was a great need for training institutions in *Madras*. He thought that some middle schools might be raised to the high school standard and have training classes attached to them. Mr. Jennings reiterated the demand for additional training facilities and said that little could be done in *Bihar and Orissa* until there were a greater number of trained lady teachers. Mr. J. G. Covernton and Mr. de la Fosse held similar opinions. **Training of teachers.**

23. Mr. Stone considered that experience had shown that only a female inspecting agency could spread female education. He could see no advantage in control being divided between the male and the female agency. He emphasised the need for ladies trained in Europe and the unanticipated and immediate success of the new colleges for women in *Madras*. Mr. Hornell **Inspection.**

improvement in recent years, and especially in *Bombay*, the *Punjab* and the *United Provinces*. In the latter province Mr. de la Fosse hoped that with the improved rates of pay it should be possible to obtain the services of well-qualified graduates for secondary schools. Mr. Hornell stated that in *Bengal* few graduates enter the teaching profession, except as a temporary measure. It was and would continue to be extremely difficult to get efficient teachers of any standing. Mr. A. L. Covernton thought that some form of pension or provident fund would prove an attraction. Mr. Mayhew was not sure that the initial pay in the *Central Provinces* was sufficient. Mr. Godley said that the supply of teachers in the *Punjab* was on the whole satisfactory. Mr. J. G. Covernton said that, though the pay of teachers in *Burma* was far higher than that in India, the Burman was not attracted towards the teaching profession.

In discussing whether inducements should be offered to teachers to become trained Mr. Hornell urged that the payment of stipends was essential in *Bengal*. There were no stipends at the David Hare Training College, and it was consequently almost impossible to induce students to come to the college other than those who were already in Government service. Mr. Mayhew said that in the *Central Provinces* scholarships were given to men even preparatory to training. Mr. Stone thought that a provident fund scheme should be confined to trained teachers and that this would go far to consolidate the teaching profession. Mr. Godley said that in the *Punjab* the staff grants that were given to aided schools, were based on the salaries paid to trained teachers and that the results were very satisfactory. Mr. J. G. Covernton said that in *Burma* a teacher receives no salary grant until he becomes qualified. In *Madras* there is a rule that half the teachers in aided secondary schools should be trained men. In *Bihar and Orissa* very liberal concessions are given to teachers under training. Many of the directors were of the opinion that it would be difficult to grant promotion on the score of training, but this practice is observed in the *United Provinces* and in *Bombay* with satisfactory results. Mr. Godley said that in the *Punjab* though the trained man obtained no immediate advantage over the untrained, he would benefit pecuniarily in the long run.

The relative claims of Government and privately managed schools.

16. In answer to the question whether Government was justified in providing training primarily for teachers employed in its own schools in preference to those of outside bodies, Mr. A. L. Covernton stated that it was the intention in *Bombay* that the Government schools should be regarded as model schools and therefore it was necessary to consider first the needs of those schools. The other directors generally agreed with Mr. Covernton. In some provinces it is the practice to reserve a portion of the vacancies at training institutions for teachers in aided schools.

The utilisation of the university courses in training.

17. The Chairman then asked how far the university courses in pedagogy might be utilised. Mr. Hornell was of the opinion that in any new university there should be a department of teaching, but the present training courses undertaken by the colleges affiliated to the university were too academic. Mr. Stone thought that the university degree in teaching had been of very distinct value in *Madras*. Mr. A. L. Covernton stated that proposals for a university degree in teaching were being considered in *Bombay*, but as yet no definite conclusion had been arrived at. In the *Punjab* graduates take the B. T. degree and receive practical training at the Training College. The Licentiate in Teaching is valued in the *United Provinces*. The general impression was that the association of the universities with the training of teachers was very beneficial and helped to raise the status of the profession.

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said there were two European inspectresses and ten Indian assistant inspectresses in *Bengal.* The male agency still play a large part in the actual inspection of primary schools, but the female agency has practically taken over all schools at district headquarters. The inspecting officers report about schools in rural tracts to the inspectresses. Mr. Hornell thought that the control over girls' schools should be handed over as far as possible to the inspectresses.

School-leaving Certificate and Matriculation Examinations.

Sub-Committee.

Improvements in the conduct of school examinations. Advantages of the certificate system.

24. There was a general agreement that the inclusion of oral and practical tests and the consideration of school records were necessary to a properly constituted school-leaving examination. Mr. Stone said that the effects of the introduction of the school-leaving certificate in *Madras* had been satisfactory. Mr. de la Fosse stated that the work of candidates and the tone of the schools where the school-leaving certificate was taken had improved. Mr. J. G. Covernton said that teachers were agreed that the school-leaving certificate was productive of better work than the matriculation. Mr. Hornell considered that the influence of the matriculation in *Bengal* was such that there was no proper system of class-work in schools. Mr. Richey said that the certificate system had effected great improvements, and especially in the written work of the schools. There was, however, a considerable difference of opinion how these objects should be achieved. The arrangements for conducting the school examinations differ considerably in the several provinces.

The matriculation and the school-leaving certificate side by side.

25. In certain provinces there are, or are intended to be, two examinations —the matriculation and the school-leaving certificate—held at much the same time and with similar courses, though the school-leaving certificate offers in addition a number of optional and non-university subjects. It was generally agreed that if there is a school-leaving certificate of this nature, it should be regarded as an equivalent to the matriculation and enable a boy to proceed to the university courses. Dealing with the question whether a university could be called upon to accept vocational subjects, Mr. Hornell was unable to distinguish between university and non-university courses. He was in favour of following the Whitehall Board of Education system of requiring certain subjects and giving a free choice of optionals in addition. All that a university could reasonably demand was that a boy had gone through a good, comprehensive school course. The object at present in the provinces referred to in (*a*), (*b*), (*c*), and (*d*) of this paragraph is to concentrate attention on the improvement of a comparatively small number of schools by means of a better conducted examination and suitably arranged courses. On the other hand, there is a danger of conflict with the University; and Mr. A. L. Covernton quoted Mr. W. H. Sharp's opinion that *Bombay* University would always refuse to recognise a departmentally controlled examination. In other provinces, again, such as the *Punjab* where sectarian rivalry exists, Mr. Godley was of the opinion that it would be inadvisable to give headmasters responsibility with examination results.

(*a*) In the *United Provinces* there is a school-leaving certificate alongside the matriculation which admits to Government service and is recognised by the University as an equivalent to matriculation. Only those schools are recognised by the Department for this examination which satisfy the requirements of the Central Board on which are representatives of the Allahabad

University. If the number of high schools so recognised (at present about half the total) were greatly increased, there might be difficulty in providing the necessary machinery. There are oral and practical tests, and attention is paid to school records. Mr. de la Fosse was careful to point out that it was the duty of the inspector to supervise the keeping of school records, but not to conduct the oral examinations of the pupils which are carried out by examiners appointed by the Board. Students may enter for both examinations, but this is rarely done. Mr. de la Fosse stated that there had been considerable improvement in the teaching and efficiency of those schools which had been recognised for the school-leaving certificate.

(*b*) In *Bengal* there is as yet no school-leaving certificate, but Mr. Hornell stated that he was submitting proposals for an examination somewhat similar to that in the *United Provinces* and confined to a small number of schools. Were the proposed examination applied to all the high schools in *Bengal*, Mr. Hornell thought that it would take some four years to complete a single examination. There should be a comprehensive curriculum to suit the university and other requirements. The Calcutta University should have two representatives on a Board of ten members, and it was intended also to give representation to the Chamber of Commerce and other bodies.

(*c*) Mr. Cunningham stated that in *Assam* they were awaiting the publication of the *Bengal* scheme, but he did not anticipate that anything would be done for a few years.

(*d*) In *Bihar and Orissa* it is intended to have a school-leaving certificate which Mr. Jennings anticipates will be recognised by the University. There should be representatives of the proposed Patna University on the Board. No fee is to be charged for this examination. There will be a great variety in the choice of subjects.

A single examination conducted by a board.

26. In certain other provinces there is or is proposed a single examination conducted by a Board and adapted to all requirements by means of a number of optional subjects and groups. The chief object is to prevent competition in the matter of examinations, and to leave it to the Board to make such improvements in the conduct of the examination as may appear from time to time advisable in the light of experience. The chief difficulty seems to lie in the composition of the Board rather than in deciding its responsibilities.

(*a*) In *Bombay* there are still two examinations, but efforts have been made recently in accordance with the recommendation of Sir Alfred Hopkinson to institute a single examination to be conducted by a joint Board with Government and University representatives. At present there is a deadlock between the University and the Government, as the University claims the right to control the examination, while the declared policy of the Government of India is that the conduct of a school-final examination should be regarded as outside the functions of a University.

(*b*) In the *Punjab* it is proposed to have a University Board with the Director of Public Instruction as chairman and a majority of its members directly connected with school education. Mr. Godley was of the opinion that the best solution of the difficulty was for the University to control the examination by the agency of such a Board. A variety of groups will be offered to the candidate, some of which will be insisted upon by the University for admission to its colleges. The University conduct a clerical and commercial examination which does not lead to university study.

The school-leaving certificate may precede the matriculation.

27. Messrs. Stone, Mayhew and Richey were generally agreed that, whereas the Department should have the right to lay down the subjects which should be taught in the schools and examined by means of a school-leaving certificate, the University also had the right to demand additional qualifications and standards. In that case the school-leaving certificate might well precede the matriculation in point of time. Mr. Stone explained the difficulties existing at present in *Madras*, which were due to the principals of colleges admitting students unfitted for a university class and to the cumbrous nature of the certificate. He thought that those boys who did not desire to go

to the University should have the benefit of a school certificate and be able to leave school immediately after the certificate examination. Mr. Richey stated that in the *North-West Frontier Province* all subjects in the school-leaving certificate are optional. If candidates pass in the subjects required by the *Punjab* University, they become matriculates. A certificate, therefore, does not necessarily carry with it the right of admission to a college. A boy who is desirous of proceeding to a college, even though he has obtained a certificate, may have to remain at school until he has passed in those subjects required by the University. Government also give a preference in the matter of Government service to those boys who pass the subjects prescribed by Government. In theory a boy has complete liberty of choice, but in practice he is limited to the subjects in which his school is recognised by the Department.

Improvement and expansion of collegiate education.

Sub-Committee.

Increase in the number of collegiate students.

28. The directors were agreed that there was a largely increasing demand for collegiate education which was in excess of existing facilities. The Chairman asked whether this big increase in numbers was due to any deterioration in the standard of the matriculation. Mr. Hornell was of the opinion that the change from the entrance to the matriculation had not resulted in the improvement which was anticipated, and especially in English. He found it difficult to believe that the standard of admission to university courses had not been lowered somehow or other. This was partly due, he thought, to the new arrangements regarding prescribed and recommended books. Mr. Stone said that in *Madras* candidates for matriculation were expected to make a detailed study of the prescribed books and a general study of the recommended books, subjects for composition being drawn from the latter. Mr. Hornell replied that this was not the case in Calcutta. Mr. A. L. Covernton said that the chief difficulty in *Bombay* was to be found in the big fluctuations in the standard of admission to colleges from year to year. Mr. Stone said that arrangements had been made in *Madras* whereby the law classes were held during the middle of the day and therefore students were unable to undertake two courses of study concurrently, but Mr. Hornell thought that the adoption of a similar practice in Calcutta would not be appreciated.

Standards imposed at present for the affiliation of colleges.

29. The Chairman then asked what standards were now imposed by the universities for the affiliation of new colleges, and whether any definite proporton between students and teachers was insisted upon. The general condition of things in provinces was explained by several of the directors. The Calcutta University allows classes of 150 students and sometimes makes exceptions in excess of that number. A class is usually divided up into sections and therefore a teacher may be called upon to deliver the same lecture to three sections, each of 150 students, on the same day. By this means, the number of students can be multiplied without a corresponding increase in the staff; and this can be done without the knowledge of the affiliating authorities. The *Punjab* University considers that a class of a hundred students is excessive, but has laid down no definite maximum. Mr. Godley said that in practice intermediate classes are usually sub-divided if they exceed a hundred, and that for science and English composition groups are formed. The Allahabad University demands that when a class exceeds sixty, it should be split into sections; and

in science when a class exceeds sixteen, a demonstrator should be entertained. The *Bombay* and *Madras* Universities lay down no definite proportion or limitation, save that in the case of the former university the total number of students attending two new second-grade colleges has been limited.

The control of the University.

30. The Conference then discussed whether some definite standard could be enforced. Mr. Stone doubted whether it would be advantageous to lay down rules and preferred to trust to the control of the university. Mr. A. L. Covernton said that an inspecting committee was appointed by the *Bombay* University every three years to inquire into the general condition of all colleges. The fact that such principals as were included on the Committee might overlook defects in their own colleges and possibly exaggerate them in others, tended to detract from the value of the Committee's recommendations. Besides, as Mr. Hornell pointed out, the only real remedy in the case of proved inefficiency would be disaffiliation, and such a practice would entail the increased inability of the University to provide for the demands of students requiring admission to colleges. The existence of difficulties about admission, however, was beneficial to the extent that it might encourage private subscriptions and endowments. For example, five lakhs had just been subscribed in Rangpur which, had there been no limitation in the other colleges, might not have been forthcoming.

A rigid limitation inadvisable.

31. The Conference was generally of the opinion that it would not be wise to lay down any hard-and-fast rules or insist on a rigid limitation of numbers in any particular class. Mr. A. L. Covernton pointed out that in fixing the numbers of a class all sorts of matters should be taken into consideration, such as the size of the room, the capacity of the teacher, and the nature of the subject and of the standard. It was unwise, therefore, to lay down a rigid maximum for each class. He thought that the upper classes were necessarily small in numbers. In answer to the question whether it was necessary to limit the numbers in the lower classes only, he said that in his opinion there was a similar necessity for restriction in the upper as in the lower classes.

The necessity for tutorial instruction.

32. The directors were agreed that tutorial work was very essential for college students and that any rules that were laid down should take this fact into consideration. Mr. Hornell pointed out that in *Bengal* the intermediate classes required school teaching, especially in English, and that there should be a proper correction of the written work. There was a general impression among the teachers in *Bengal* that many boys come up unfitted for collegiate instruction and therefore there was all the more need for suitable and effective teaching in addition to the lectures. In the upper classes, though the lectures might be delivered to a larger number of students, mere lecturing is inadequate for B. A. instruction. There should also be proper provision for tutorial assistance. Mr. A. L. Covernton said that in *Bombay* an attempt had been made to split up junior classes into sections, so that the teachers might be able to teach in accordance with school methods. The experiment has proved only a qualified success. It has been difficult to obtain the services of trained graduates and there was an unfortunate tendency on the part of the teachers employed to lecture rather than to teach. Mr. Stone pointed out that it was certainly wrong to suppose, as was often done, that the tutorial work was inferior in importance to the lectures and could, therefore, be entrusted to less qualified teachers.

The necessity of some general and flexible standard.

33. Mr. J. G. Covernton urged that it was possible to lay down some rough proportion between students and teachers. For example, Mr. Hunter had suggested to him that for physics and chemistry the proportion should be 20 to 1 for the intermediate and 15 to 1 for the bachelor classes. Mr. Sharp referred to the recommendations of the committees recently appointed to consider the creation of new universities by which, taking the college as a whole, there would be roughly one teacher to every 13 students, but there would be no definite limitation in the number of students attending any particular lecture. This was considered by the directors a sound principle, Mr. Cunningham dissenting. Mr. Hornell emphasised the importance of fixing some standard. The object should be not so much to limit the numbers of students attending any particular lecture as to ensure that the lectures were supplemented by some form of teaching in the lower classes and by tutorial supervision in all classes.

Possible economies in the organisation of collegiate education.

34. The Conference then discussed whether any economies are possible in the present organisation of collegiate education so that the available teaching resources might be used to their utmost capacity. The question of instituting an inter-collegiate system of lectures was first discussed. Opinions varied according to the position of colleges. Mr. A. L. Covernton said that the colleges in *Bombay* were too far apart for such co-operation and that, even if they were not, the time-table difficulties would be considerable. Mr. Hornell pointed out that the climatic conditions of *Bengal* would prove a big obstacle. On the other hand, Mr. Godley said that in Lahore colleges were close together and therefore inter-collegiate lectures could easily be arranged. Such lectures are given already in certain M. A. subjects, and higher science has become regarded as an inter-collegiate subject. Mr. Stone said that in *Madras* inter-collegiate work was carried out in the small honour classes in the specialised subjects, but that such a system could not well be worked for large classes. Arrangements are made whereby the students do their work at one college in the morning and at another in the afternoon. The lady students of the Government College attend the science classes at the Presidency College. Mr. de la Fosse said that in the post-graduate classes students could go to different colleges for their lectures, both at Agra and Allahabad. Mr. Mayhew said that the system of inter-collegiate lectures was carried out in Nagpur even in the undergraduate classes in science. Mr. Hornell then referred to the abnormal number of lectures which many of the students were expected to attend. It was agreed that the number might well be decreased without loss of efficiency and that by this means college teachers and students might have more time for tutorial work.

Reference to the Universities.

35. It was thought by some of the directors that if a reference on the subject were made to the universities, the reply would be that improvements could only be made through increased expenditure and that the colleges had no money at their disposal. Mr. Godley said that the D. A. V. College, where the number of students to each teacher was high, might object to the acceptance of a Government grant. Mr. Hornell similarly instanced the Ripon and other colleges in Calcutta. Mr. Stone and Mr. Hornell both thought that the reference to the universities might be beneficial, if only as a means of promoting a discussion. The present tendency was one of drift, and an effort should be made, at any rate, to evolve some sort of policy. Some of the other directors were not so hopeful of beneficial results, but they did not think that the universities would have any objections to such a reference.

Second-grade colleges.

36. Mr. Hornell considered that the recommendation of the Universities Commission that second-grade colleges should be discontinued was a mistake, and this was the general opinion of the other directors. Mr. Stone said that in *Madras* there were a number of such institutions which did useful work, but he pointed out that they were usually attached to high schools and were not separate institutions. Mr. Jennings urged that if high schools were thus extended, the lower classes for small boys should be detached as preparatory schools. The directors were agreed that some kind of institution was required between the present school and the college which would relieve the congestion in the colleges and provide a form of instruction suited to the needs of the boys. Mr. de la Fosse and Mr. Godley urged that the work carried out in such institutions was school work and should, therefore, be conducted as such. Mr. A. L. Covernton also considered that there should be a class of school, such as there is in Scotland, quite divorced from the university but leading up to the university system. He considered that if such higher grade or collegiate schools were established, colleges might continue to admit matriculates direct and that the two systems might for a time work together, the system of direct admission gradually lapsing in favour of a system of intermediate institutions. Second-grade colleges *qua* colleges were undesirable, but they should be encouraged as schools. Mr. Stone considered that schools should be so extended and improved as to cover the present intermediate work. Mr. de la Fosse agreed and remarked that in that case the B. A course could be made one of three years. There was a very general feeling that the present position is unsatisfactory in that it leads to congestion in the big centres and an unsuitable form of instruction in the lower college classes. The general conclusion thus arrived at

was that the present college course begins too soon, that the school course should be prolonged, and that the intermediate course should as far as possible be relegated to schools. Mr. Mayhew dissociated himself from any expression of opinion in favour of second grade colleges as an extension of the schools in view of his local Government's general university policy.

Educational Literature.

Sub-Committee.

37. There was a very general agreement that much benefit might be derived from an extended dissemination of useful information and advice among those interested in educational matters. Mr. Mayhew and Mr. Cunningham especially were very emphatic about the necessity of some definite organisation whereby these objects might be achieved. Need for educational literature.

38. In considering the questions of educational journals and magazines Mr. A. L. Coverton explained that "Indian Education" was published by a private firm under the editorship of a member of the Indian Educational Service and that the *Bombay* Government besides paying a small subsidy purchased a certain number of copies for use in schools. He understood that the journal was run at a considerable financial loss to the publishers who probably obtained some advantage in return in the shape of advertisements. Mr. Stone stated that the "Educational Review" in *Madras* was a private venture. The *Madras* Government purchase a certain number of copies both of that journal and of "Indian Education." Mr. Godley said that the "Punjab Educational Journal" was a private magazine, but the editor was usually an educational officer. The general impression was that these magazines, though fulfilling a useful purpose, were not well supported, and were always in danger of discontinuance. On the other hand, the vernacular magazines, some of which were published by Government, were very satisfactory and widely appreciated. Existing journals.

39. At first there seemed to be a desire on the part of directors for an authoritative educational journal to be published by some central authority. Mr. Mayhew stated that he was particularly anxious to have not only articles of general educational interest, but also news of what was going on in other provinces and in other countries. It was not easy, however, to find a central authority ready to undertake so big a responsibility and it was also explained that there might be difficulties in obtaining a Government subvention for this purpose. It was agreed, therefore, that the best course would be to allow the existing journals and magazines to continue as at present and also to support indirectly the publication of an educational supplement which had been proposed by a well-known Indian newspaper. Many of the directors thought that such a publication in addition to its educational value might be useful as an advertising agency. Educational officers would be permitted to contribute to the supplement provided that they kept within the terms of the Civil Service Regulations. It was urged that the newspaper in question was not read at all widely in certain parts of India, but Sir Edward Maclagan replied that the proposed supplement would be separate from the ordinary editions of the paper. An Educational Supplement to an Indian Newspaper.

40. It was also agreed that the Occasional Reports had served a useful purpose and should be continued under present arrangements. The idea of having an Occasional Report on the training of teachers was discussed. In addition to these reports which are issued by the Bureau of Education it was Occasional Reports and bulletins.

thought there was considerable scope for the issue of bulletins and monographs by the same authority. These bulletins might deal with matters of professional importance, such as the training of primary school teachers, visual and manual instruction, education for factory children and so forth. Summaries of publications received from other countries might also prove useful. Sir Edward Maclagan stated that a reprint of a portion of the London University Commission's report had been arranged and would be ready very shortly. The directors stated that this would be of great value. The bulletins should be written as far as possible by an educationist with an intimate knowledge of the work described and could, if required, be published under the author's name and might not exceed some four or five pages in length. Mr. Sharp offered a word of warning against an excess of such publications, which was approved by the directors.

Mr. Sharp said that he would welcome suggestions from directors as to suitable subjects and authors. It was suggested that a report dealing with the school education provided by the Buckingham Mills and the schools at the Beniadih mines and on the Darjeeling and Jalpaiguri tea gardens might be asked for and published.

41. Mr. Sharp said that he was sometimes asked for old resolutions and minutes which were now out of print and had begun putting some together. This work would involve the compilation of a connecting narrative which, however, need not amount to a regular history of Indian Education. The directors thought the idea very suitable.

APPENDIX A.

Comparative claims of different classes on education.

—	Percentage of pupils at the various stages of education.			Percentage of direct public expenditure (excluding buildings, equipment, and inspection) on		
	Colleges.	Secondary stage.	Primary stage.	Colleges.	Secondary schools.	Primary schools.
Madras	·6	6	93·4	9	13	78
Bombay	·7	7·7	91·6	11	15	74
Bengal	1	11	88	28	32	40
United Provinces	1	9	90	20	33	47
Punjab	1	11	88	16	37	47
Burma	·2	5·8	94	5	61	34
Bihar and Orissa	·3	4·6	95·1	13	24	63
Central Provinces	·4	7·2	92·4	7	32	61
Assam	·3	6·3	93·4	10	25	65
All India	·8	8	91·2	15	27	58

APPENDIX B.

Technical Education. 1914-15.

——	Madras.	Bombay.	Bengal.	United Provinces.	Punjab.	Burma.	Bihar and Orissa.	Central Provinces.	Assam.	North-West Frontier Province.	Coorg.	Delhi.	Total.
No. of Colleges—													
Engineering	1	1	1	1	…	…	…	…	…	…	…	…	4
Commerce	…	1	…	…	…	…	…	…	…	…	…	…	1
No. of Schools of—													
Art	1	1	4	2	1	…	…	…	…	…	…	…	9
Engineering and Surveying	…	1	4	5	2	2	3	1	…	…	…	…	18
Technical and Industrial	…	23	54	34	28	3	38	9	7	…	…	2	198
Commercial	1	36	15	3	1	2	3	…	…	…	…	…	61
Expenditure on Colleges—													
Provincial and Local Funds	Rs. 1,37,000	Rs. 1,71,000	Rs. 2,07,000	Rs. 2,59,000	…	…	…	…	…	…	…	…	Rs. 7,74,000
Fees	30,000	27,000	18,000	19,000	…	…	…	…	…	…	…	…	94,000
Other sources	1,000	…	6,000	69,000	…	…	…	…	…	…	…	…	76,000
Total	1,68,000	1,98,000	2,31,000	3,47,000	…	…	…	…	…	…	…	…	9,44,000
Expenditure on Schools—													
Provincial and Local Funds	70,000	3,51,000	2,26,000	2,21,000	Rs. 1,43,000	Rs. 52,000	Rs. 1,13,000	Rs. 41,000	Rs. 4,000	…	…	Rs. 7,500	12,28,000
Fees	4,500	65,000	45,000	11,000	14,000	5,000	14,000	…	…	…	…	250	1,59,000
Other sources	7,500	1,76,000	81,000	1,33,000	12,000	3,000	16,000	9,000	3,000	…	…	450	4,41,000
Total	82,000	5,92,000	3,52,000	3,65,000	1,69,000	60,000	1,43,000	50,000	7,000	…	…	8,200	18,28,000
Total Expenditure—													
Provincial and Local Funds	2,07,000	5,22,000	4,33,000	4,80,000	1,43,000	52,000	1,13,000	41,000	4,000	…	…	7,500	20,02,000
Fees	34,500	92,000	63,000	30,000	14,000	5,000	14,000	…	…	…	…	250	2,53,000
Other sources	8,500	1,76,000	87,000	2,02,000	12,000	3,000	16,000	9,000	3,000	…	…	450	5,17,000
Total	2,50,000	7,90,000	5,83,000	7,12,000	1,69,000	60,000	1,43,000	50,000	7,000	…	…	8,200	27,72,000

APPENDIX C.

Circular letter from the Hon'ble Sir E. D. Maclagan, K.C.I.E., C.S.I., Secretary to the Government of India, Department of Education, to all local Governments and Administrations, no. 813, dated the 30th August 1916, on the subject of the desirability of improving the supply and the training of teachers in India.

The attention of the Government of India has lately been again drawn to the inadequacy of the arrangements in many provinces for the training of teachers for secondary and primary schools. As local Governments are aware, the question of the training of teachers has not of late years been neglected, the Government of India having, from time to time, given considerable grants for this object and a great deal having been done in the same direction at the expense of the Provincial Governments. The number of teachers trained in the whole of India has, between the years 1911-12 and 1914-15, risen by 38 per cent. while the amount of money spent on the training of teachers has risen by 45 per cent. The proportion of trained teachers is still, however, in most provinces very small and the average for the whole of India is at present 29 per cent only.

2. In the replies to this Department letter nos. 838—849, dated the 9th May 1913, the various local Governments supplied estimates of the expenditure likely to be incurred during the three years—1913-14 to 1915-16—on the training of teachers. But it is observed that no general standard was adopted as representing the extent to which training should be supplied in the various provinces. In view of the fact that for several years to come there can be no expectation of a grant of money from the Imperial Government for this class of expenditure, it is recognized that any standard which may now be adopted must necessarily fall far short of the standard which could be prescribed if suitable funds were available. At the same time, it appears to the Government of India that it would be useful for the several local Governments to have before them some standard in dealing with this question, and as at present advised they are of opinion that the lowest result which should be aimed at by local Governments is that the number of teachers (male and female) to be trained in each year for Indian schools should not be less than the number of new teachers whom it is necessary to provide during the year in order to take the place of teachers who have died or resigned or in order to meet the demands caused by the extension of education. The Government of India would be glad, therefore, if local Governments could undertake to estimate the number of teachers thus required during the next five years beginning from April 1917 and should consider how far they will be able to carry out the proposal that the number of teachers trained in each year should not be less than the number of teachers so required. It would be for the local Governments further to decide whether, in cases where the training supplied would not cover more than the number of new teachers required each year, the number trained should include any of the existing teachers in preference to the supply of training to a certain number of the new teachers. It is further recognised that, although, as a rule, a complete training cannot be supplied in less than two years at the least, the present exigencies may justify the adoption of a normal period of training amounting to a lesser period such as one year—a period which has already been adopted in several provinces. If, on consideration of the results brought out by an estimate such as is above suggested, the local Governments should find that the standard recommended is unsuitable, it would be open to local Governments to devise some other standard : but, as above noted, the Government of India are of opinion that it will be better in all cases for the local Governments to adopt some standard however inadequate rather than to leave the expansion of training institutions to be dealt with in an unsystematic and haphazard manner. In commending this matter to the attention of local Governments, the Government of India would be glad to be informed in due time of the courses which each local Government may decide to follow in order to ensure an adequate supply of trained teachers in the future.

3. In this connection I am to recommend that local Governments should enquire into the possibility of making improvements and economies in the present system of training, and to suggest that such enquiries might be facilitated by information as to the systems in force in other provinces.

4. I am further to invite attention again to the recommendations made in paragraphs 11 (*vi*) and 22 (1) (*b*) of the Government of India Resolution no. 301-C. D., dated the 21st February 1913, regarding the provision of adequate pay for teachers. From the information available to them the Government of India understand that much has been done in most provinces to carry out the wishes of the Government of India in this respect, but they would be glad if local Governments would take this opportunity of considering the progress made and of judging as to the adequacy of the measures hitherto taken for improving the remuneration of the teaching staff.

5. I am directed to add that the reference now made by the Government of India is in respect of action which may suitably be taken when normal conditions return, and that so long as the war lasts and the necessity for conserving the financial resources of Government remains paramount, it will ordinarily not be possible to provide for any material increase of provincial expenditure in the directions indicated.

TRAINING OF TEACHERS.

1914-15.

Percentage of trained teachers.

Province.	Primary Schools.	Middle Schools.	High Schools.	Total.	Government and Board Schools.	Aided Schools.	Unaided Schools.
Madras	35	66	62	38	61	30	11
Bombay*	34	18	28	33	42	20	9
Bengal	14	26	8	15	37	13	10
United Provinces	31	63	25	35	47	6	9
Punjab	48	61	58	52	64	28	27
Burma	16	43	73	24	76	21	...
Bihar and Orissa	17	41	16	18	45	20	6
Central Provinces	27	36	25	29	33	12	4
Assam	39	40	20	38	43	27	10
North-West Frontier Province	30	54	52	38	40	32	9
Coorg	65	53	77	65	66	50	...
Delhi	49	51	54	53	78	40	6
India	27	41	29	29	47	20	10

* Figures for Indian schools are not given separately.

APPENDIX D.

Number of students per teacher in Arts Colleges.

Province.	Government.				Board and Municipal.				Aided.				Unaided.				Total.			
	Colleges.		Students per teacher.		Colleges.		Students per teacher.		Colleges.		Students per teacher.		Colleges.		Students per teacher.		Colleges.		Students per teacher.	
	1912.	1915.	1912.	1915.	1912.	1915.	1912.	1915.	1912.	1915.	1912.	1915.	1912.	1915.	1912.	1915.	1912.	1915.	1912	1915.
Madras	4	5	13·4	16·0	3	4	10·9	18	22	26	16·7	20·4	3	2	6·0	15·9	32	37	14·9	19·3
Bombay	2	3	24·2	17·9	...	...	...	...	5	4	33	30·3	1†	...	1	...	11§	7	33·8	25·6
Bengal	8	8	17·9	18·4	1	1	13	18·4	10	14	25·4	24·3	14	11	29·3	37·4	33	34	24·1	26·6
United Provinces	4	4	11·4	19·2	...	...	...	...	25	29	17·3	20·6	8	7	10·2	22·2	37	40	14·0	20·7
Punjab	1	1	11·0	20·0	...	...	...	...	6	7	24·4	22·8	4	2	21·7	32·7	11	10	19·7	25·5
Burma	1	1	20·2	24·1	...	...	...	...	1	1	4·5	5·6*	...	...	...	...	2	2	14·0	17·4
Bihar and Orissa	2	2	18·1	13·7	1	...	2·8	...	2	4	22·5	20·2	2	1	42·8	5‡	7	7	21·7	16·6
Central Provinces and Berar	2	2	15·5	17·5	...	...	...	...	2	2	19·8	23·3	...	...	...	...	4	4	17·9	21·1
Assam	1	2	11·6	17·8	...	...	...	...	1	...	14·0	...	...	...	...	...	2	2	12·3	17·8
India	25	28	15·6	18·6	5	5	10·1	18·1	75	91	20·8	21·8	32	23	21·6	32·2	140§	147	19·5	22·6

* There is only 1 college with 67 pupils and 12 teachers. — † The Techno-Chemical Laboratory, Bombay.
‡ There is only 1 college with 5 teachers and 25 pupils.
§ Includes 3 Native States Colleges.

Educational Publications on sale at the Office of the Superintendent Government Printing, India, Calcutta.

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